

WHAT IS CLAIMED IS:

1. A network device comprising:

a processor to send and receive control and message traffic between the network device and other devices in a network;  
5 a first port to allow the network device to communicate with a first network;  
a second port to allow the network device to communicate with a second network;  
a transcompression element to route compression renegotiation messages and to transmit renegotiation indication messages between the first and second networks.

2. The network device of claim 1, the transcompression element further comprising an  
10 outgoing compressor and an incoming decompressor.

3. The network device of claim 1 further comprising a gateway between a public switched telephone network and a data network.

4. The network device of claim 1, the message traffic further comprising messages in accordance with International Telecommunications Union standard V.150.0.

15 5. The network device of claim 1, the transcompression element to transmit renegotiation confirmation messages further comprising a transcompression element to transmit renegotiation confirmation messages in accordance with International Telecommunication standard V.44.

6. The network device of claim 1, the processor further to issue connection messages  
20 including an in-band renegotiation capability indicator.

7. The network device of claim 1, the processor further to monitor message traffic for renegotiation messages during periods of compatible compression and decompression parameters.

8. A method of controlling compression in a network, comprising:

25 receiving an indication of compression renegotiation at a first network device; and transmitting an indication of compression renegotiation acknowledgement to a compressor element on a second network device.

9. The method of claim 8 receiving a compression renegotiation message further comprising receiving an in-band renegotiation message in accordance with International  
30 Telecommunication Union standard V.44 and transmitting an indication of compression renegotiation further comprising transmitting a compression renegotiation indicator..

10. The method of claim 8 receiving an indicator of compression renegotiation further comprising receiving a compression renegotiation indicator and transmitting an indicator of compression renegotiation acknowledgement further comprising transmitting a

compression confirmation message in accordance with International Telecommunications Union standard V.44.

11. A method of controlling compression in a network, comprising:

determining if a compression method for outgoing data is compatible with a  
decompression method for incoming data;  
if the compression method and the decompression methods are compatible,  
transmitting incoming data as outgoing data without compression or decompression;  
monitoring message traffic for any indications of compression renegotiation; and  
if a compression renegotiation message is received, determining if the renegotiation  
message will result in incompatibility between the compression and decompression  
methods.

12. The method of claim 11, the method comprising performing transcompression if an incompatibility does result.

13. The method of claim 11, the method comprising:

determining that the compression method and the decompression methods are  
incompatible;  
performing transcompression on incoming data to transmit it as outgoing data;  
receiving an indication of compression renegotiation;  
and determining the compression renegotiation will result in compatible compression  
and decompression.

14. The method of claim 11, wherein the compression method is one selected from the group comprising: V.44, V.42bis and MNP5 compression.

15. The method of claim 12, wherein the compression method is one selected from the group comprising: V.44, V.42bis and MNP5.

16. The method of claim 11, monitoring message traffic further comprising monitoring simple packet relay transport messages between gateways in a data network.

17. A method of communicating in a data network, comprising:

generating a connect message;  
including an in-band renegotiation capability advertisement in the connect message;  
and  
transmitting the connect message.

18. The method of claim 17, the in-band renegotiation capability further comprising a V.44 in-band renegotiation message.

19. The method of claim 17, transmitting a connect message further comprises transmitting a connect message from a first gateway to a second gateway.

20. An article of machine-readable code containing instructions that, when executed, cause the machine to:

receive an indication of compression renegotiation at a decompressor on a first network device; and

transmit an indication of compression renegotiation acknowledgement to a compressor element on a second network device.

21. The article of claim 20, the instructions, when executed, causing the machine to receive a compression renegotiation message further cause the machine to receive an in-band renegotiation message in accordance with International Telecommunication Union standard V.44 and the instructions, when executed, causing the machine to transmit an indication of compression renegotiation further cause the machine to transmit a compression renegotiation indicator.

22. The article of claim 20, the instructions, when executed, causing the machine to receive an indicator of compression renegotiation further cause the machine to receive a compression renegotiation indicator and the instructions, when executed, causing the machine to transmit an indicator of compression renegotiation acknowledgement further cause the machine to transmit a compression confirmation message in accordance with International Telecommunications standard V.44.

23. An article of machine-readable code containing instructions that, when executed, cause the machine to:

determine if a compression method for outgoing data is compatible with a decompression method for incoming data;

if the compression method and the decompression methods are compatible, transmit incoming data as outgoing data without compression or decompression;

monitor message traffic for any indications of compression renegotiation; and

if an indication of compression renegotiation message is received, determine if renegotiation will result in incompatibility between the compression and decompression methods.

24. The article of claim 23, the instructions further causing the machine to perform transcompression if an incompatibility does result.

25. The article of claim 23, the instructions further causing the machine to determine that the compression method and the decompression methods are incompatible;

perform transcompression on incoming data to transmit it as outgoing data;

receive a compression renegotiation message;

and determine the compression renegotiation will result in compatible compression and decompression.

26. An article of machine-readable code containing instructions that, when executed, cause the machine to:

- 5       generate a connect message;  
include an in-band renegotiation capability advertisement in the connect message; and  
transmit the connect message.

27. A network device comprising:

- 10       a means for controlling message traffic between the network device and other devices  
in a network;  
a means for allowing the network device to send and receive the message traffic;  
a means for receiving compression renegotiation messages and to transmit  
renegotiation confirmation messages.

15       28. The network device of claim 27 the means for receiving further comprising an outgoing  
compressor and an incoming decompressor.

29. The network device of claim 27 further comprising a gateway between a public switched telephone network and a data network.

30. The network device of claim 27 the message traffic further comprising messages in accordance with International Telecommunications Union standard V.150.0.

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